IN THE CLAIMS

Please amend the claims as follows:

1. (Currently amended) A method for arranging detector sections for an imaging system that has a field of view that is defined by a rotational axis and imaging geometry, said method comprising:

providing a plurality of detector sections; ~~and~~

arranging the detector sections in an asymmetric, spaced-apart arrangement about a central axis of the field of view.

2. (Original) A method in accordance with Claim 1 wherein providing a plurality of detector sections comprises providing a plurality of detector sections that have substantially equal lengths.

3. (Original) A method in accordance with Claim 2 further comprising positioning adjacent detector sections apart from each other a distance that is less than the length of the detector sections.

4. (Original) A method in accordance with Claim 3 further comprising positioning at least one of the detector sections proximate to an edge of the field of view.

5. (Original) A method in accordance with Claim 1 further comprising positioning at least one of the detector sections proximate to an edge of the field of view.

6. (Original) A method for arranging detector sections for an imaging system that has a field of view that is defined by a rotational axis and imaging geometry, said method comprising:

providing a plurality of detector sections that have substantially equal lengths;

positioning adjacent detector sections at a distance apart that is less than the length of the detector sections; and

arranging the detector sections in an asymmetric arrangement about a central axis of the field of view such that at least one of the detector sections is proximate to an edge of the field of view.

7. (Currently amended) A detection array for an imaging system that has a field of view that is defined by a rotational axis and imaging geometry, said array comprising a plurality of detector sections arranged asymmetrically and spaced-apart about a central axis of the field of view.

8. (Original) A detection array in accordance with Claim 7 wherein said detector sections have substantially equal length.

9. (Original) A detection array in accordance with Claim 8 wherein adjacent said detector sections are at a distance apart that is less than said length of said detector sections.

10. (Original) A detection array in accordance with Claim 9 wherein at least one of said detector sections is proximate to an edge of the field of view.

11. (Original) A detection array in accordance with Claim 7 wherein at least one of said detector sections is proximate to an edge of the field of view.

12. (Original) A detection array for an imaging system that has a field of view that is defined by a rotational axis and imaging geometry, said detection array comprising a plurality of detector sections having substantially equal lengths, adjacent said detector sections are a distance apart that is less than said length of said detector sections, said detector sections arranged asymmetric about a central axis of the field of view such that at least one of said detector sections is proximate to an edge of the field of view.

13. (Currently amended) A method for performing a computed tomography scan of an object utilizing an imaging system including a gantry and a rotational axis and imaging geometry that defines a field of view, said method comprising:

providing a plurality of detector sections;

arranging the detector sections in an asymmetric, spaced-apart arrangement about a central axis of the field of view;

collecting data from the detector sections in a first position;

rotating the gantry a first angular increment and subsequent increments to alternate positions such that a plurality of specific angular locations are identified during one complete rotation of an x-ray source and detector about the object;

collecting data from the detector sections in a plurality of angular positions; and

using a reconstruction algorithm to generate a reconstruction of the object using the collected data.

14. (Original) A method in accordance with Claim 13 wherein said providing a plurality of detector sections further comprises providing a plurality of detector sections that have substantially equal lengths.

15. (Original) A method in accordance with Claim 14 wherein said collecting data from the detector sections at a plurality of angular positions comprises collecting data from the detector section at each position.

16. (Currently amended) A scanning apparatus comprising:

a gantry;

an emitter that has a field of view that is defined by a rotational axis and imaging geometry, said emitter secured to said gantry; and

an array of detector sections secured to said gantry opposite said emitter, said detector sections arranged spaced-apart and asymmetric about a central axis of the field of view.

17. (Original) A scanning apparatus in accordance with Claim 16 further comprising:

a processor operationally coupled to said gantry, said processor configured to collect data from said detector sections in at least one of a plurality of positions.

18. (Original) A scanning apparatus comprising:

a gantry;

an emitter that has a field of view that is defined by a rotational axis and imaging geometry, said emitter secured to said gantry;

an array of detector sections secured to said gantry opposite said emitter, said detector sections arranged asymmetric about a central axis of the field of view, said detector sections having substantially equal lengths, said detector sections separated by a length that is less that the length of each said individual detector sections; and

a processor operationally coupled to said gantry, said processor configured to collect data from said detector sections in at least one of a plurality of positions.